

**THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

NFC TECHNOLOGY, LLC,

v.

SAMSUNG ELECTRONICS CO., LTD.,  
et al.

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CASE NO. 2:15-cv-283-JRG-RSP

**CLAIM CONSTRUCTION**  
**MEMORANDUM AND ORDER**

On February 23, 2016, the Court held a hearing to determine the proper construction of disputed claim terms in United States Patents No. 7,098,770 and 7,905,419. Having reviewed the arguments made by the parties at the hearing and in the parties' claim construction briefing (Dkt. Nos. 69, 78, and 88),<sup>1</sup> having considered the intrinsic evidence, and having made subsidiary factual findings about the extrinsic evidence, the Court hereby issues this Claim Construction Memorandum and Order. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

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<sup>1</sup> Citations to documents (such as the parties' briefs and exhibits) in this Claim Construction Memorandum and Order refer to the page numbers of the original documents rather than the page numbers assigned by the Court's electronic docket unless otherwise indicated.

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## **I. BACKGROUND**

Plaintiff has alleged infringement of United States Patents No. 6,700,551 (“the ’551 Patent”), 7,098,770 (“the ’770 Patent”), 7,665,664 (“the ’664 Patent”), and 7,905,419 (“the ’419 Patent”). In general, these patents relate to data communication. Plaintiff is no longer asserting the ’551 Patent or the ’664 Patent in the present case. *See* (Dkt. Nos. 105, 109, 110, 111).

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with preliminary constructions for the disputed terms with the aim of focusing the parties’ arguments and facilitating discussion as to those terms. Those preliminary constructions are set forth below within the discussion for each term.

## **II. LEGAL PRINCIPLES**

### **A. Claim Construction**

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *Id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. The general rule—subject to certain specific exceptions discussed *infra*—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003); *Azure*

*Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) (“There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.”) (vacated on other grounds).

“The claim construction inquiry . . . begins and ends in all cases with the actual words of the claim.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). “[I]n all aspects of claim construction, ‘the name of the game is the claim.’” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)). First, a term’s context in the asserted claim can be instructive. *Phillips*, 415 F.3d at 1314. Other asserted or unasserted claims can also aid in determining the claim’s meaning, because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); see also *Phillips*, 415

F.3d at 1323. “[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history is another tool to supply the proper context for claim construction because, like the specification, the prosecution history provides evidence of how the U.S. Patent and Trademark Office (“PTO”) and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* at 1318; *see also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be “unhelpful as an interpretive resource”).

Although extrinsic evidence can also be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read

claim terms.” *Id.* The Supreme Court recently explained the role of extrinsic evidence in claim construction:

In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period. *See, e.g., Seymour v. Osborne*, 11 Wall. 516, 546 (1871) (a patent may be “so interspersed with technical terms and terms of art that the testimony of scientific witnesses is indispensable to a correct understanding of its meaning”). In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the “evidentiary underpinnings” of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.

*Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

#### **B. Departing from the Ordinary Meaning of a Claim Term**

There are “only two exceptions to [the] general rule” that claim terms are construed according to their plain and ordinary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution.”<sup>2</sup> *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)); *see also GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (“[T]he specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal.”). The standards for finding lexicography or disavowal are “exacting.” *GE Lighting Solutions*, 750 F.3d at 1309.

To act as his own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *Id.* (quoting *Thorner*,

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<sup>2</sup> Some cases have characterized other principles of claim construction as “exceptions” to the general rule, such as the statutory requirement that a means-plus-function term is construed to cover the corresponding structure disclosed in the specification. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002).

669 F.3d at 1365); *see also Renishaw*, 158 F.3d at 1249. The patentee’s lexicography must appear “with reasonable clarity, deliberateness, and precision.” *Renishaw*, 158 F.3d at 1249.

To disavow or disclaim the full scope of a claim term, the patentee’s statements in the specification or prosecution history must amount to a “clear and unmistakable” surrender. *Cordis Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009); *see also Thorner*, 669 F.3d at 1366 (“The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.”) “Where an applicant’s statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable.” *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013); *see also Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016) (“When the prosecution history is used solely to support a conclusion of patentee disclaimer, the standard for justifying the conclusion is a high one.”).

**C. Functional Claiming and 35 U.S.C. § 112, ¶ 6 (pre-AIA) / § 112(f) (AIA)**<sup>3</sup>

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112, ¶ 6; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Section 112, Paragraph 6, provides that a structure may be claimed as a “means . . . for performing a specified function” and that an act may be claimed as a “step for performing a specified function.” *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002).

But § 112, ¶ 6 does not apply to all functional claim language. There is a rebuttable presumption that § 112, ¶ 6 applies when the claim language includes “means” or “step for”

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<sup>3</sup> Because the applications resulting in the Asserted Patents were filed before September 16, 2012, the effective date of the America Invents Act (“AIA”), the Court refers to the pre-AIA version of § 112.

terms, and that it does not apply in the absence of those terms. *Masco Corp.*, 303 F.3d at 1326; *Williamson*, 792 F.3d at 1348. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. See *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015) (§ 112, ¶ 6 does not apply when “the claim language, read in light of the specification, recites sufficiently definite structure” (quotation marks omitted) (citing *Williamson*, 792 F.3d at 1349; *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014))); *Williamson*, 792 F.3d at 1349 (§ 112, ¶ 6 does not apply when “the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for structure”); *Masco Corp.*, 303 F.3d at 1326 (§ 112, ¶ 6 does not apply when the claim includes an “act” corresponding to “how the function is performed”); *Personalized Media Commc’ns, L.L.C. v. Int’l Trade Comm’n*, 161 F.3d 696, 704 (Fed. Cir. 1998) (§ 112, ¶ 6 does not apply when the claim includes “sufficient structure, material, or acts within the claim itself to perform entirely the recited function . . . even if the claim uses the term ‘means.’” (quotation marks and citation omitted)).

When it applies, § 112, ¶ 6 limits the scope of the functional term “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347. Construing a means-plus-function limitation involves multiple steps. “The first step . . . is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). “[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* A “structure disclosed in the specification is



‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Id.* The focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.* The corresponding structure “must include all structure that actually performs the recited function.” *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). However, § 112 does not permit “incorporation of structure from the written description beyond that necessary to perform the claimed function.” *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

**D. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA) <sup>4</sup>**

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 2124. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 2130. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *Id.* at 2130 n.10. “[I]ndefiniteness is a question of law and in effect part of claim construction.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

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<sup>4</sup> Because the applications resulting in the Asserted Patents were filed before September 16, 2012, the effective date of the America Invents Act (“AIA”), the Court refers to the pre-AIA version of § 112.

When a term of degree is used in a claim, “the court must determine whether the patent provides some standard for measuring that degree.” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, “the court must determine whether the patent’s specification supplies some standard for measuring the scope of the [term].” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005); *accord Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (citing *Datamize*, 417 F.3d at 1351).

### **III. THE PARTIES’ STIPULATED TERMS**

The parties reached agreement on constructions as stated in their November 25, 2015 Joint Claim Construction and Prehearing Statement (Dkt. No. 57 at Ex. A) and their February 22, 2016 Amended Joint Claim Construction Chart (Dkt. No. 110). The parties’ agreements are set forth in Appendix A to the present Claim Construction Memorandum and Order.

### **IV. DISPUTED TERMS IN U.S. PATENT NO. 7,098,770<sup>5</sup>**

The ’770 Patent, titled “Contactless Integrated Circuit Reader,” issued on August 29, 2006, and bears an earliest filing date of October 16, 2000. The Abstract of the ’770 Patent states:

The present invention relates to a contactless integrated circuit reader operating by inductive coupling, comprising an antenna circuit for sending an alternating magnetic field, circuits for applying an alternating excitation signal to the antenna circuit and circuits for modulating the amplitude of an antenna signal present in the antenna circuit according to data to be sent. The reader includes circuits for simulating the operation of a contactless integrated circuit, arranged to inhibit the application of the excitation signal to the antenna circuit and to apply a load modulation signal to the antenna circuit when data is to be sent. The load modulation signal is capable of disturbing a magnetic field sent by another

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<sup>5</sup> On April 11, 2016, Plaintiff filed “NFCT’s Notice of Withdrawal of Certain Claims” indicating that it was no longer litigating claims 36, 37, 40, 42, 43, and 46 of U.S. Patent No. 7,098,770 (the “Dropped Claims”). (Dkt. No. 121). In light of this representation, the Court has not construed disputed terms that appear only in the Dropped Claims.

contactless integrated circuit reader and of being detected by the other contactless integrated circuit reader.

**A. “antenna circuit”**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“a circuit, including a coil, for radiating and/or receiving a magnetic field”	“Plain meaning which is ‘a circuit that radiates or receives electromagnetic waves’”

(Dkt. No. 57, Ex. C at 13); (Dkt. No. 67, Ex. B at 8); (Dkt. No. 69 at 12); (Dkt. No. 78 at 9); (Dkt. No. 110 at p. 5 of 43). The parties have submitted that this term appears in Claims 1, 8, 23, 28, 29, and 31 of the ’770 Patent. (Dkt. No. 67, Ex. B at 8).<sup>6</sup>

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with the following preliminary construction: “a circuit, including a coil, for radiating and/or receiving a magnetic field.”

**(1) The Parties’ Positions**

Plaintiff argues that “during prosecution the inventors clearly and unmistakably limited the antenna circuit of their invention to require . . . a coil.” (Dkt. No. 69 at 12–13).

Defendants respond that “[Defendants’] construction is based on the plain meaning of ‘antenna circuit’ as used in the claims and comports with how ‘antenna circuit’ would be understood by one of ordinary skill in the art.” (Dkt. No. 78 at 10). Defendants argue that “[t]he prosecution history sections that [Plaintiff] relies on are not expressions of manifest exclusion that disavow non-coil antennas.” (*Id.*).

Plaintiff replies that Defendants’ arguments as to the prosecution history fail because “an applicant’s argument that a prior art reference is distinguishable on a particular ground can serve as a disclaimer of claim scope even if the applicant distinguishes the reference on other grounds

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<sup>6</sup> This term also appears in Dropped Claims 36 and 42.

as well.” (Dkt. No. 88 at 4) (quoting *Saffran v. Johnson & Johnson*, 712 F.3d 549, 559 (Fed. Cir. 2013)).

At the February 23, 2016 hearing, Defendants submitted that nothing in the specification indicates that using a coil is preferred. As to the prosecution history, Defendants argued that the patentees distinguished the prior art reference at issue based on use of inductive coupling, not use of a coil. Plaintiff responded that the patentee specifically relied upon use of a coil antenna instead of a different type of antenna.

## (2) Analysis

In general, the term “antenna” can refer to “a device that provides a means for radiating or receiving radio waves.” (Dkt. No. 78, Ex. I) (Warren L. Stutzman, et al., *Antenna Theory and Design* 1 (2nd ed. 1998)); *see also* (Dkt. No. 78-22) (Jan. 19, 2016 Durgin Decl. at ¶ 29).

During prosecution, however, the patentee argued as follows as to the “Gunnarsson” reference (PCT International Application Publication No. WO 98/08311):

In Gunnarsson, by utilizing a backscattering technique, a communication unit sends a microwave incident signal in the form of an ultrahigh frequency (UHF) electric field by way of a dipole antenna. The frequency of the electric field is generally in the range of about 800 megahertz (MHz) through several gigahertz (GHz), e.g., 2.45 GHz, as in the example cited by Gunnarsson at page 7, line 2. A transponder has a UHF/microwave antenna, which is also a dipole antenna and **not a coil** (see e.g., antenna 10 of transponder 2 in Fig. 2 of Gunnarsson) and modulates the impedance of its antenna so as to modify the reflection coefficient of the antenna in accordance with the data to be emitted (i.e., a data stream). As a result of the impedance modulation, information sidebands are emitted. Thus, backscattering data are sent by reflection of the UHF/microwave electric field on the dipole antenna, which does not absorb the electric field any more when its initial calibrated impedance is modified.

In contradistinction, utilizing the inductive coupling technique, as in the present invention and in Enguent, a reader emits a radio frequency (RF) magnetic field by way of a resonant antenna circuit which **includes a coil**. The frequency of the magnetic field is 13.56 MHz according, for example, to standards ISO 14443A/B and 15693. A contactless integrated circuit (CIC) sends data by modulating the impedance of its antenna circuit which also **includes a coil**. Since the antenna

**coil** of the CIC is inductively coupled to the antenna **coil** of the reader, the modulation of the impedance of the antenna **coil** of the CIC causes a corresponding modulation of the impedance of the antenna **coil** of the reader. The modulation of the impedance **coil** of the reader causes variations in the current absorbed by the antenna **coil** of the reader in response to the RF excitation signal supplied by the reader oscillator. **Thus, the coil of the reader is equivalent to the primary windings of a transformer and the coil of the transponder is equivalent to the secondary windings of a transformer.** If the primary and secondary windings of the transformer are not closely coupled, the reader does not detect the load modulation the transponder applies to its antenna **coil** and data are not received. **As a result, the communication distances offered by inductive coupling techniques are quite different than backscattering UHF/microwave signals.** For example, typical communication distances of less than 1 meter are common for inductive coupling techniques and sometimes even as small as several centimeters; while on the other hand, communication distances of tens of meters are possible utilizing backscattering techniques.

(Dkt. No. 69, Ex. M) (Jan. 25, 2006 Amendment at 23–24) (emphasis added); *see (id.* at 26) (“the present invention is directed to methods of load modulation by inductive coupling using an antenna circuit having a coil”); (*id.* at 29) (“Gunnarsson is directed to” transponders that have “a dipole antenna and not a coil . . .”).

Defendants’ expert opines that inductive coupling does not require a coil and that “coil antennas are merely one type of antenna circuit capable of inductive coupling.” *See* (Dkt. No. 78-22) (Jan. 19, 2016 Durgin Decl. at ¶ 29).

Regardless, because the patentee clearly and repeatedly relied upon the antenna circuit having a coil as a distinction over the prior art, the Court’s construction should include such a limitation. *See, e.g., Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1381 (Fed. Cir. 2011) (“The patentee is bound by representations made and actions that were taken in order to obtain the patent.”); *Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1374–79 (Fed. Cir. 2008) (“a patentee may limit the meaning of a claim term by making a clear and unmistakable disavowal of scope during prosecution”) (citation and internal quotation marks omitted). Such a construction is also consistent with the specification. *See* ’770 Patent at 8:26–

27 (“antenna circuit LCR2 made up of a coil Lr2 and a capacitor Cr2”); *see also id.* at 1:22–24 (“antenna circuit 21 comparable by analogy to the secondary winding of a transformer the primary winding of which would be constituted by the antenna circuit 11 of the reader”).

The Court therefore hereby construes **“antenna circuit”** to mean **“a circuit, including a coil, for radiating and/or receiving a magnetic field.”**

**B. “excitation circuit for delivering/that delivers/to deliver an alternating excitation signal to the antenna circuit/respective antenna circuit”**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain Meaning <sup>7</sup>	<p>Governed by 35 U.S.C § 112, ¶ 6.</p> <p>Function:  “to deliver alternating current to the antenna circuit / respective antenna circuit”</p> <p>Structure:  “the circuit MDC1 of Figure 2, including at least the transistor T1, with its gate driven by alternating signal S1 and having its drain powered through inductor L1 by microprocessor ports, such as p1–p4 of Figure 2 as described in the specification at 5:39–6:16 and 6:46–55”</p>

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<sup>7</sup> Plaintiffs previously submitted (Dkt. No. 67, Ex. B at 8–9):

[Plaintiff] reserves its right to challenge [Defendants’] contention that this term should be governed by 35 U.S.C. § 112, ¶ 6.

Nonetheless, pursuant to P.R. 4-2(a), [Plaintiff] identifies the following exemplary “structure(s), act(s), or material(s)” that may correspond to this term. See, e.g., ’770 Patent Figs. 2, 4C, Abstract, 5:39–49[,], 6:47–55, 7:25–29, 8:23–32, 11:35–47, 12:19–25.”

[Plaintiff] notes that its investigation is ongoing and it expressly reserves the right to identify additional structure(s), act(s), or material(s) corresponding to this term.

(Dkt. No. 57, Ex. C at 15–16); (Dkt. No. 67, Ex. B at 8–9); (Dkt. No. 69 at 13); (Dkt. No. 78 at 11); (Dkt. No. 110 at p. 5 of 43). The parties have submitted that this term appears in Claims 1, 23, and 28 of the '770 Patent. (Dkt. No. 67, Ex. B at 8).<sup>8</sup>

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with the following preliminary construction: “Plain meaning,” “Not governed by 35 U.S.C. § 112, ¶ 6.”

(1) The Parties’ Positions

Plaintiff argues this is not a means-plus-function term because “‘excitation circuit for delivering . . .’ conveys sufficient structure to one skilled in the art.” (Dkt. No. 69 at 13–14). Alternatively, Plaintiff argues: “[Defendants] point[] to the MDC1 circuit of Figure 2, which the specification states is ‘an amplitude modulation circuit,’ not an ‘excitation circuit.’ ’770 patent 5:41. One skilled in the art would understand the term to cover, instead of or in addition to the many circuits not expressly disclosed in the patent, a circuit including one or more of oscillator OSC1 and/or capacitor C1.” (Dkt. No. 69 at 15).

Defendants respond that “[t]he disputed terms only recite functional language,” and “recite no structure for an ‘excitation circuit’ . . . .” (Dkt. No. 78 at 11–12). In other words, Defendants argue, “the term ‘excitation circuit’ in the ’770 Patent is not surrounded by sufficient structural context.” (*Id.* at 13). Defendants also emphasize that “dual-mode operation is the purported novelty of the claims and thus, accepting [Plaintiff’s] argument for patentability, a person of ordinary skill would not have known the structure of an excitation circuit that could permit dual-mode operation.” (*Id.*). Finally, Defendants submit that “necessary structure for performing th[e] function is identified in Figure 2.” (*Id.*).

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<sup>8</sup> This term also appears in Dropped Claims 36 and 42.

Plaintiff replies that “[Defendants] and [their] expert do not dispute, nor could they, that a skilled artisan would know how to construct an ‘excitation circuit [that delivers] an alternating excitation signal to the antenna circuit.’” (Dkt. No. 88 at 5).

At the February 23, 2016 hearing, Defendants argued that the claims do not set forth sufficient structure because several circuits work together to perform the claimed function. Plaintiff responded that an oscillator is one example of an excitation circuit.

## (2) Analysis

Claim 1 of the ’770 Patent, for example, recites (emphasis added):

1. A device in order to transmit/receive data by inductive coupling comprising:  
an antenna circuit to generate a magnetic field; and  
an *excitation circuit for delivering an alternating excitation signal to the antenna circuit*,  
the device being configured to operate in a first operating mode and a second operating mode,  
when in the first operating mode, the device modulates the excitation signal when data is transmitted, and  
when in the second operating mode, the device applies a load modulation signal with two states to the antenna circuit when data is transmitted, so as to simulate the operation of a contactless integrated circuit, the load modulation signal being configured to disturb a magnetic field generated by another device in order to transmit/receive data by inductive coupling and being configured to be detected by the other device as if the load modulation signal were a load modulation signal applied to an antenna load modulation switch of a contactless integrated circuit.

Title 35 U.S.C. § 112, ¶ 6 provides: “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” “[T]he failure to use the word ‘means’ . . . creates a rebuttable presumption . . . that § 112, para. 6 does not apply.” *Williamson*, 792 F.3d at 1348 (citations and internal quotation marks omitted). “When a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will



apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Id.* at 1349 (citations and internal quotation marks omitted).

*Williamson*, in an *en banc* portion of the decision, abrogated prior statements that the absence of the word “means” gives rise to a “strong” presumption against means-plus-function treatment. *Id.* (citation omitted). *Williamson* also abrogated prior statements that this presumption “is not readily overcome” and that this presumption cannot be overcome “without a showing that the limitation essentially is devoid of anything that can be construed as structure.” *Id.* (citations omitted). Instead, *Williamson* found, “[h]enceforth, we will apply the presumption as we have done prior to *Lighting World* . . . .” *Id.* (citing *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004)). In a subsequent part of the decision not considered *en banc*, *Williamson* affirmed the district court’s finding that the term “distributed learning control module” was a means-plus-function term that was indefinite because of lack of corresponding structure, and in doing so *Williamson* stated that “‘module’ is a well-known nonce word.” *Id.* at 1350.

The term “circuit” as used here is distinguishable from the word “module” in *Williamson*. *Id.* at 1348 (“What is important is . . . that the term, as the name for structure, has a reasonably well understood meaning in the art.”) (quoting *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)).

In so finding, the Court applies long-standing principles articulated prior to the abrogated *Lighting World* decision. See, e.g., *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004) (“when the structure-connoting term ‘circuit’ is coupled with a description of the circuit’s operation, sufficient structural meaning generally will be conveyed to persons of

ordinary skill in the art, and § 112 ¶ 6 presumptively will not apply”; noting “language reciting [the circuits’] respective objectives or operations”); *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1372 (Fed. Cir. 2003) (“While we do not find it necessary to hold that the term ‘circuit’ by itself always connotes sufficient structure, the term ‘circuit’ with an appropriate identifier such as ‘interface,’ ‘programming’ and ‘logic,’ certainly identifies some structural meaning to one of ordinary skill in the art.”); *Personalized Media Commc’ns, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 705 (Fed. Cir. 1998) (“Even though the term ‘detector’ does not specifically evoke a particular structure, it does convey to one knowledgeable in the art a variety of structures known as ‘detectors.’ We therefore conclude that the term ‘detector’ is a sufficiently definite structural term to preclude the application of § 112, ¶ 6.”); *Greenberg*, 91 F.3d at 1583 (finding that “detent mechanism” was not a means-plus-function term because it denotes a type of device with a generally understood meaning in the mechanical arts).<sup>9</sup>

Defendants have cited *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316 (Fed. Cir. 2008), which addressed the term “circuitry to provide a format signal changeable in response to the format of said video type signal.” *See id.* at 1338. In that case, however, “[t]he trial court held, and the parties agree[d], that the . . . limitation . . . should be construed as [a] means-plus-function limitation[] in accordance with 35 U.S.C. § 112, ¶ 6.” *Id.* (emphasis added).<sup>10</sup>

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<sup>9</sup> *Greenberg*, 91 F.3d at 1583 (“‘detent’ denotes a type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms”); *id.* (“It is true that the term ‘detent’ does not call to mind a single well-defined structure, but the same could be said of other commonplace structural terms such as ‘clamp’ or ‘container.’ What is important is not simply that a ‘detent’ or ‘detent mechanism’ is defined in terms of what it does, but that the term, as the name for structure, has a reasonably well understood meaning in the art.”)

<sup>10</sup> Defendants have also cited *MLR, LLC v. Kyocera Wireless Corp.*, No. 3:05-CV-00935, Dkt. No. 87, slip op. at 4 (S.D. Cal. Oct. 27, 2006) (Brewster, J.) (finding “adaptive control circuit” term to be a means-plus-function term). *MLR* is not binding on this Court and, moreover, the

The Court therefore hereby expressly rejects Defendants’ argument that the “excitation circuit . . .” term is a means-plus-function term. No further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”); *ActiveVideo Networks, Inc. v. Verizon Commcn’s, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012).

The Court accordingly hereby construes **“excitation circuit for delivering/that delivers/to deliver an alternating excitation signal to the antenna circuit/respective antenna circuit”** to have its **plain meaning**.

**C. “the device modulates the excitation signal,” “generating a magnetic field and modulating the amplitude of the magnetic field,” and “modulating the amplitude of the generated magnetic field”**

<b>“the device modulates the excitation signal” (Claim 1)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“varies the amplitude, frequency, or phase of a signal for generating a magnetic field to transmit data”	“the device applies a modulation signal to change the amplitude of the alternating excitation signal”

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cited decision sets forth no analysis as to which this Court could give deference. *See id.* at 4–5. *MLR* is therefore unpersuasive.

<b>“generating a magnetic field and modulating the amplitude of the magnetic field” (Claim 23)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“generating a magnetic field and varying the amplitude of the magnetic field to transmit data”	“driving the antenna with the alternating excitation signal and applying a modulation signal to change the amplitude of the excitation signal”

(Dkt. No. 57, Ex. C at 16, 22, 24); (Dkt. No. 67, Ex. B at 9, 11, 12); (Dkt. No. 69 at 15); (Dkt. No. 78 at 14).

The parties have reached agreement on the construction for this term. (Dkt. No. 110 at pp. 5, 13, 22 of 43). The parties’ agreement is set forth in Appendix A to this Claim Construction Memorandum and Order.

**D. “load modulation signal”**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“signal for transmitting data that causes a disturbance of a magnetic field generated by another device”	Indefinite

(Dkt. No. 57, Ex. C at 17); (Dkt. No. 67, Ex. B at 10); (Dkt. No. 69 at 16); (Dkt. No. 78 at 16); (Dkt. No. 110 at p. 2 of 43). The parties have submitted that this term appears in Claims 1–3, 6, 8, 14, 15, 21, 23–25, and 29–31 of the ’770 Patent. (Dkt. No. 67, Ex. B at 10).<sup>11</sup>

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with the following preliminary construction: “signal that transmits data by causing a disturbance of a magnetic field generated by another device.”

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<sup>11</sup> This terms also appears in Dropped Claims 36, 37, 42, and 43.

### (1) The Parties' Positions

Plaintiff argues that the specification and prosecution history are sufficiently clear that a “load modulation signal” is capable of causing a disturbance of the magnetic field sent by another device. (Dkt. No. 69 at 17).

Defendants respond that “[w]hile the term ‘load modulation signal’ has an established accepted use in the context of passive contactless integrated circuit cards, the ’770 Patent uses this term to mean several different things, rendering the claim scope ambiguous.” (Dkt. No. 78 at 16).

Plaintiff replies that “[b]readth is not indefiniteness.” (Dkt. No. 88 at 5) (quoting *In re Gardner*, 427 F.2d 786, 788 (C.C.P.A. 1970)).

At the February 23, 2016 hearing, the parties presented no oral arguments as to this term.

### (2) Analysis

Claim 1 of the ’770 Patent, for example, recites (emphasis added):

1. A device in order to transmit/receive data by inductive coupling comprising:
  - an antenna circuit to generate a magnetic field; and
  - an excitation circuit for delivering an alternating excitation signal to the antenna circuit,
  - the device being configured to operate in a first operating mode and a second operating mode,
  - when in the first operating mode, the device modulates the excitation signal when data is transmitted, and
  - when in the second operating mode, the device applies a *load modulation signal* with two states to the antenna circuit when data is transmitted, so as to simulate the operation of a contactless integrated circuit, the *load modulation signal* being configured to disturb a magnetic field generated by another device in order to transmit/receive data by inductive coupling and being configured to be detected by the other device as if the *load modulation signal* were a *load modulation signal* applied to an antenna load modulation switch of a contactless integrated circuit.

The specification discloses that a “load modulation signal is capable of causing a disturbance of the magnetic field [] sent by [a] reader . . . .” ’770 Patent at 9:47–49; *see id.*

at 7:44–53, 9:44–51; *see also* (Dkt. No. 69, Ex. M) (Jan. 25, 2006 Amendment at 29) (“the device applies a load modulation signal to disturb the magnetic field generated by another device”).

Defendants argue that “[t]he ’770 Patent uses ‘load modulation signal’ to refer to at least three different types of signals,” namely “a signal that opens and closes a load modulation switch to communicate data,” “an active signal applied to circuitry that emulates load modulation without using a load modulation switch,” and an “RF signal that reflects back to the reader from an antenna either performing or emulating load modulation.” (Dkt. No. 78 at 16).

On balance, the various disclosures cited by Defendants are all consistent with Plaintiff’s proposed construction. That is, the particular manner of disturbing the magnetic field generated by another device is not a limitation of the term “load modulation signal.”

In the absence of any inconsistency, the *Teva* case cited by Defendants is inapplicable. *See Teva Pharms. USA v. Sandoz, Inc.*, 789 F.3d 1335, 1338, 1345 (Fed. Cir. 2015) (“There are three different measures of molecular weight relevant to this appeal: peak average molecular weight ( $M_p$ ), number average molecular weight ( $M_n$ ), and weight average molecular weight ( $M_w$ ). Each measure is calculated in a different manner. The claim does not specify which measure to use and in a typical polymer sample,  $M_p$ ,  $M_n$ , and  $M_w$  have different values.”). The *Dow Chemical* case cited by Defendants is similar. *See Dow Chem. Co. v. Nova Chems. Corp. (Canada)*, 803 F.3d 620, 633–635 (Fed. Cir. 2015) (finding the term “slope of strain hardening” indefinite because there were at least four methods to measure the parameter, and “the method chosen for calculating the slope of strain hardening could affect whether or not a given product infringes the claims”).

Defendants have thus failed to demonstrate that the claims at issue fail to “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129. The Court therefore hereby rejects Defendants’ indefiniteness argument.

The Court accordingly hereby construes **“load modulation signal”** to mean **“signal that transmits data by causing a disturbance of a magnetic field generated by another device.”**

**E. “contactless integrated circuit,” “detected . . . as if . . .,” and “antenna load modulation switch”**

<b>“contactless integrated circuit” (Claims 1, 8, 14, 18, 28, and 30)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“passive device that does not send a magnetic field and that sends data to a reader by short-circuiting its antenna circuit by means of a switch”	“a passive device that does not send a magnetic field and comprises an antenna circuit and a load modulation switch”
<b>“detected . . . as if the load modulation signal were a load modulation signal applied to an antenna load modulation switch of a contactless integrated circuit” (Claims 1, 14, and 30)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
Plain Meaning	“detected . . . as a load modulation signal of a contactless integrated circuit although actually a signal applied to the antenna circuit and without using an antenna load modulation switch”
<b>“antenna load modulation switch” (Claims 1, 14, and 30)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“switch connected to terminals of an antenna circuit through a resistor, to perform load modulation in a passive device”	“a switch coupled to the antenna circuit, the switch being driven by a load modulation signal to send data by changing the impedance of the antenna circuit”

(Dkt. No. 57, Ex. C at 18, 19, 20); (Dkt. No. 67, Ex. B at 10–11); (Dkt. No. 69 at 17); (Dkt. No. 78 at 17, 19); (Dkt. No. 110 at pp. 2–4 of 43).<sup>12</sup>

Defendants have submitted: “To focus the parties’ disputes, [Defendants] agree[] with [Plaintiff] that ‘detected . . . as if the load modulation signal were a load modulation signal applied to an antenna load modulation switch of a contactless integrated circuit’ (claims 1, 14, 30, 36, and 42) is governed by its plain meaning and needs no construction.” (Dkt. No. 78 at 9 n.5).

Also, the parties have agreed that “contactless integrated circuit” should be construed to mean: “passive device that does not send a magnetic field and that sends data to a reader by short-circuiting its antenna circuit by means of a switch.” (Dkt. No. 110 at pp. 2–3 of 43).

The parties’ agreements are set forth in Appendix A to this Claim Construction Memorandum and Order.

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with the following preliminary construction: “antenna load modulation switch” means “a switch coupled to the antenna circuit, the switch being driven by a load modulation signal to send data by changing the impedance of the antenna circuit.”

#### (1) The Parties’ Positions

Plaintiff submits that these disputed terms relate to “simplifying the circuitry needed for a reader to transmit data in a passive mode by simulating the operation of a contactless integrated circuit without having to actually provide an antenna load modulation switch of a contactless integrated circuit.” (Dkt. No. 69 at 17–18). Plaintiff also argues that Defendants’ proposed constructions “are wrong because, when considered together, they exclude the preferred

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<sup>12</sup> These three terms also appear in Dropped Claims 36 and 42.



embodiment.” (*Id.* at 18). Further, Plaintiff argues that “the ’770 patent defines precisely what a contactless integrated circuit is and the type of antenna load modulation switch it employs.” (*Id.* at 19) (citing ’770 Patent at 1:15–34). Finally, Plaintiff argues that the term “antenna load modulation switch” appears only together with the phrase “of a contactless integrated circuit,” and “[t]he specification describes a ‘load modulation switch’ in three instances and only in the context of a contactless integrated circuit.” (Dkt. No. 69 at 20).

Defendants respond that “[Plaintiff] attempts to limit ‘antenna load modulation switch’—which is a carve out from the claim scope—to a single exemplary embodiment to argue that anything else must infringe.” (Dkt. No. 78 at 18). Defendants explain that, for example, “the RFID Handbook describes not only a load modulation switch that connects a resistor to the antenna (ohmic load modulation) but also a load modulation switch that connects a capacitor to the antenna (capacitive load modulation).” (*Id.*) (citing *id.*, Ex. J at 91, 93).

Plaintiff replies: “[T]he switches in the RFID Handbook that [Defendants] cite[] are not disclosed for use in contactless integrated circuits, but are instead used in ‘transponders.’ Ex. 78-16 at 71, 91. [Defendants] ha[ve] not shown these transponders to be representative of ‘contactless integrated circuits’ as a whole.” (Dkt. No. 88 at 6–7) (emphasis omitted).

At the February 23, 2016 hearing, Plaintiff argued that in the RFID Handbook cited by Defendants, the term “load modulator” by itself refers to using a resistor whereas the term “capacitive load modulator” refers to using a capacitor. *See* (Dkt. No. 78, Ex. J at 91, 93). Defendants responded that the claim language at issue is directed not to any specific structure but rather to emulating the function and result of the antenna load modulation switch of a contactless integrated circuit.

## (2) Analysis

Claim 1 of the '770 Patent, for example, recites (emphasis added):

1. A device in order to transmit/receive data by inductive coupling comprising:
  - an antenna circuit to generate a magnetic field; and
  - an excitation circuit for delivering an alternating excitation signal to the antenna circuit,the device being configured to operate in a first operating mode and a second operating mode,
  - when in the first operating mode, the device modulates the excitation signal when data is transmitted, and
  - when in the second operating mode, the device applies a load modulation signal with two states to the antenna circuit when data is transmitted, so as to simulate the operation of a *contactless integrated circuit*, the load modulation signal being configured to disturb a magnetic field generated by another device in order to transmit/receive data by inductive coupling and being configured to be detected by the other device as if the load modulation signal were a load modulation signal applied to an *antenna load modulation switch* of a *contactless integrated circuit*.

As a threshold matter, Plaintiff has urged that the construction for “antenna load modulation switch” should explain that the switch is “in a passive device.” Because the “antenna load modulation switch” is recited as being “of a contactless integrated circuit,” and because the parties’ agreed-upon construction for “contactless integrated circuit” specifies that it is a “passive device,” Plaintiff’s proposal in this regard as to the term “antenna load modulation switch” is redundant and unnecessary and is therefore rejected.

The parties’ primary dispute centers on Plaintiff’s proposal of requiring a “resistor.” The specification discloses:

Here, the object of the present invention is to cause a load modulation signal SX2 to appear in the antenna circuit LCR2 of the reader RD2, without having to add a *load modulation switch* (of the type of switch TM present at the terminals of the antenna circuit of the integrated circuit CIC) in parallel with the antenna circuit LCR1 of the reader RD1.

(*Id.* at 9:38–43) (emphasis added); *see (id.* at Figs. 1 & 2); *see also (id.* at 6:61–7:2) (“load modulation switch TM” is “connected to the terminals of the antenna circuit LCP through a load resistor RM”).

Defendants have submitted persuasive evidence demonstrating that an inductive load can be modulated in manners other than the limitations proposed by Plaintiff. *See* (Dkt. No. 78-22, Jan. 19, 2016 Durgin Decl. at ¶¶ 52–53); *see also (id.* at ¶ 56) (“virtually any two differing loads Z1 and Z2 consisting of any combination of short-circuit, open-circuit, resistors, capacitors and inductors is capable of producing a detectable load modulation at an inductive reader”).

On balance, the use of a resistor is a specific feature of particular embodiments that should not be imported into the claims. *See, e.g., Comark*, 156 F.3d at 1187; *Phillips*, 415 F.3d at 1323. The Court also rejects Plaintiff’s argument that Defendants’ proposals are overbroad. Of particular note, Defendants’ proposed construction requires “the switch being driven by a load modulation signal.”

Further, the parties dispute whether the transistor T1 in Figure 2 is an “antenna load modulation switch” (and, if so, whether such an interpretation would exclude a preferred embodiment from the scope of the claims). The specification discloses:

A—Sending Data to the Integrated Circuit:

When data DT is to be sent to the circuit CIC, the microprocessor MP1 of the reader RD1 delivers an amplitude modulation signal SM1 coded according to a determined protocol by means of the ports P1 to P4. FIG. 3A, shows an example of data DT to be sent and an example of coding of the signal SM1 is represented in FIG. 3B. Classically, this coding involves temporarily setting the signal SM1 to 0 when a 0 is sent, and maintaining the signal SM1 at 1 when a 1 is sent. *The change of the signal SM1 to 0 blocks the transistor T1 in the circuit MDC1 and extinguishes the antenna signal SAI*, because the excitation signal S1 [is] no longer being applied to the antenna circuit LCR1. The magnetic field FLD1, represented in FIG. 3C, thus has a short amplitude modulation when a bit on 0 is sent and has no amplitude modulation when a bit on 1 is sent (pulse coding).

'770 Patent at 7:16–32 (emphasis added)

Defendants' proposed construction does not exclude this embodiment because the transistor T1 is not “of a contactless integrated circuit.” *See id.* at Cl. 1 (“the load modulation signal being configured to disturb a magnetic field generated by another device in order to transmit/receive data by inductive coupling and being configured to be detected by the other device as if the load modulation signal were a load modulation signal applied to an antenna load modulation switch *of a contactless integrated circuit*”) (emphasis added). Instead, transistor T1 is part of modulation circuit MDC1 of reader RD1 and the above-quoted passage describes the “operation of the reader RD1 in active mode.” *See* '770 Patent at 6:47; *see also id.* at 5:39–6:45. The asserted claims are drafted to cover this embodiment in which a device behaves “as if” it were a contactless integrated circuit without actually being a contactless integrated circuit.

Finally, the Court expressly relies upon Defendants' acknowledgement at the February 23, 2016 hearing that the “switch” set forth in the parties' agreed-upon construction for “contactless integrated circuit” is an “antenna load modulation switch.”

The Court therefore hereby construes the disputed terms as set forth in the following chart:

<u>Term</u>	<u>Construction</u>
<b>“contactless integrated circuit”</b> (Claims 1, 8, 14, 18, 28, and 30)	( <i>See</i> Appendix A to this Claim Construction Memorandum and Order)
<b>“detected . . . as if the load modulation signal were a load modulation signal applied to an antenna load modulation switch of a contactless integrated circuit”</b> (Claims 1, 14, and 30)	( <i>See</i> Appendix A to this Claim Construction Memorandum and Order)

<b>“antenna load modulation switch”</b>  (Claims 1, 14, and 30)	<b>“a switch coupled to the antenna circuit, the switch being driven by a load modulation signal to send data by changing the impedance of the antenna circuit”</b>
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**F. “one of a bit and a flag”**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“a bit or a flag”	“Indefinite. Or if the court construes this term [Defendants] propose[] the construction one of a bit and one of a flag.”

(Dkt. No. 57, Ex. C at 21); (Dkt. No. 67, Ex. B at 11); (Dkt. No. 69 at 22); (Dkt. No. 78 at 19); (Dkt. No. 110 at p. 6 of 43). The parties have submitted that this term appears in Claims 10 and 28 of the ’770 Patent. (Dkt. No. 67, Ex. B at 11).

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with the following preliminary construction: “a bit or a flag.”

(1) The Parties’ Positions

Plaintiff argues that whereas Plaintiff’s proposal is consistent with the specification, “[Defendants’] proposal improperly reads out the preferred embodiment and renders ‘one of’ superfluous.” (Dkt. No. 69 at 22).

Defendants respond that “[o]ne of a bit and a flag’ is ambiguous and fails to inform one of skill in the art of the invention’s scope, as the plain meaning of ‘one of’ suggests one or the other, but the plain meaning of ‘and’ is conjunctive and would require both a bit and a flag.” (Dkt. No. 78 at 19–20).

Plaintiff replies by reiterating that “[t]he specification . . . discloses an embodiment that utilizes only a single flag.” (Dkt. No. 88 at 7).

At the February 23, 2016 hearing, the parties presented no oral arguments as to this term.

## (2) Analysis

Claim 10 of the '770 Patent, for example, recites (emphasis added):

10. A device according to claim 1, further comprising:  
    *one of a bit and a flag* stored in a register to control switching from one of the first and second operating modes to the other of the first and second operating modes.

The claim language is sufficiently clear on its face, and the Court hereby expressly rejects Defendants' argument that there is any inconsistency between the phrase "one of" and the word "and." Instead, the phrase "a bit and a flag" simply defines the set from which "one of" must be selected. Further, although the claim does not exclude the possibility of using both a bit and a flag, the claim requires only "one." See *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1372 (Fed. Cir. 2005) ("The transition 'comprising' creates a presumption that the recited elements are only a part of the device, that the claim does not exclude additional, unrecited elements").

Defendants have cited *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870 (Fed. Cir. 2004), which found that—as to the disputed phrase "at least one of a desired program start time, a desired program end time, a desired program service, and a desired program type"—"the phrase 'at least one of' modifies each member of the list, i.e., each category in the list. Therefore, the district court correctly interpreted th[e] [disputed] phrase as requiring that the user select at least one value for each category; that is, at least one of a desired program start time, a desired program end time, a desired program service, and a desired program type." *Id.* at 886. *SuperGuide* is distinguishable, however, because there the court highlighted that "[e]very disclosed embodiment teaches that the user must choose a value for each designated category." *Id.* at 887. Here, by contrast, as Plaintiff's expert has noted, the specification discloses an

embodiment that uses “flag Bm” without requiring an additional bit indicator. (Dkt. No. 69, Ex. F, Jan. 4, 2016 Walker Decl. at ¶ 80 (citing ’770 Patent at 8:33–43)).

Finally, although Claim 22 of the ’770 Patent recites “a bit or a flag,” Defendants have not demonstrated that the same concept cannot be recited in different ways in different claims. *See, e.g., Tandon Corp. v. U.S. Int’l Trade Comm’n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987) (“practice has long recognized that claims may be multiplied to define the metes and bounds of the invention in a variety of different ways”) (citation, internal quotation marks, and ellipsis omitted).

The Court therefore hereby rejects Defendants’ indefiniteness argument as well as Defendants’ alternative proposed construction.

The Court accordingly hereby construes **“one of a bit and a flag”** to mean **“a bit or a flag.”**

## **V. DISPUTED TERMS IN U.S. PATENT NO. 7,905,419**

The ’419 Patent, titled “Method for Routing Outgoing and Incoming Data in an NFC Chipset,” issued on March 15, 2011, and bears an earliest priority date of May 10, 2006. The Abstract of the ’419 Patent states:

A method for routing data in a chipset comprising at least one host processor and an RFID-type contactless data send/receive interface includes, in response to a command for opening a data path sent by a source point located in the host processor and designating a destination point located in the contactless data send/receive interface, defining a data path linking the source point to the destination point by allocating to the data path a routing channel number and by saving in a routing table the routing channel number and routing parameters comprising at least one identifier of the source point and one identifier of the destination point, and sending to the destination point data supplied by the source point by encapsulating the data in a frame having a header field comprising the routing channel number.

**A. “contactless data send/receive interface”**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
Plain Meaning	“interface capable of being configured to different modes and protocols for sending or receiving data”

(Dkt. No. 57, Ex. C at 26); (Dkt. No. 67, Ex. B at 14); (Dkt. No. 69 at 24). The parties have submitted that this term appears in Claims 1, 4, 7, 12, 15, and 18 of the ’419 Patent. (Dkt. No. 67, Ex. B at 14).

Plaintiff argues that “[t]he term’s plain meaning—which is an ‘interface for sending or receiving data in a contactless matter’—is clear and does not require construction.” (Dkt. No. 69 at 24). Plaintiff also argues that Defendants’ proposed construction “contradicts the surrounding claim language” and “imports a limitation from an embodiment into the claims.” (*Id.*). Further, Plaintiff argues claim differentiation as to dependent Claims 2 and 13. (*Id.*). Finally, Plaintiff argues that “[Defendants’] construction improperly reads out the word ‘contactless.’” (*Id.* at 25).

Defendants respond: “To focus the disputes, [Defendants] agree[] with [Plaintiff] that ‘contactless data send/receive interface’ (claims 1, 4, 7, 12, 15, 18) is governed by its plain meaning and needs no construction.” (Dkt. No. 78 at 25 n.12); *see* (Dkt. No. 110 at p. 29 of 43).

The parties’ agreement in this regard is set forth in Appendix A to this Claim Construction Memorandum and Order.

**B. “a source point located in the host processor” and “destination point”**

<b>“a source point located in the host processor” (Claims 1 and 12)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“software in a host processor through which data is sent”	“location within the host processor from which a data stream originates”



<b>“destination point” (Claims 1, 12, and 18)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“software through which data is received”	“location receiving a data stream”

(Dkt. No. 57, Ex. C at 27, 28); (Dkt. No. 67, Ex. B at 14); (Dkt. No. 69 at 25); (Dkt. No. 78 at 25); (Dkt. No. 110 at pp. 29–30 of 43).

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with the following preliminary constructions: “a source point located in the host processor” means “a hardware or software location in the host processor from which a data stream originates” (“[t]he phrase ‘from which a data stream originates’ refers to where a ‘data stream’ originates, not necessarily where the ‘data’ originates”); and “destination point” means “hardware or software location that receives a data stream.”

(1) The Parties’ Positions

Plaintiff argues that “[t]he specification explains that the ‘source point’ and the ‘destination point’ are software,” and Plaintiff urges that “[Defendants’] construction of the ‘source point’ and the ‘destination point’ each as a ‘location’ is not supported by any intrinsic evidence” and “would render the specification and claims 9 and 20 nonsensical.” (Dkt. No. 69 at 26). Plaintiff also argues that “claims 1 and 12 themselves require ‘data’ sent from the source point to the destination point,” not a “data stream.” (*Id.* at 27). Finally, as to Defendants’ proposal that the source point be where the “data stream originates,” Plaintiff argues that “[t]here is no such requirement in the intrinsic evidence.” (*Id.*).

Defendants respond that “[n]either ‘source point located in’ nor ‘destination point located in’ are terms of art, but instead have the respective plain meanings of a location from which

something originates and a location at which something is received.” (Dkt. No. 78 at 25). Defendants argue that “[Plaintiff’s] constructions improperly rewrite the claims, introducing ‘software through which’ data is sent or received to replace the concept of source and destination points.” (*Id.*). Defendants conclude that “a source point located in the host processor is a location within the host processor from which a data stream originates, and a destination point is a location receiving a data stream.” (*Id.*). Finally, Defendants urge that “[Plaintiff’s] construction incorrectly eliminates the concept of a starting point (source) and ending point (destination), instead construing ‘point’ as software ‘through which’ data flows and arguing a data stream need not originate at a source point.” (*Id.* at 26).

Plaintiff replies that the disclosures cited by Defendants are “consistent with [Plaintiff’s] construction, since software can be located in a host processor or an interface.” (Dkt. No. 88 at 8).

At the February 23, 2016 hearing, Plaintiff reiterated that although software may reside at a particular location, the location is not the software. Defendants responded that they agreed with the Court’s preliminary construction.

## (2) Analysis

Claim 1 of the ’419 Patent, for example, recites (emphasis added):

1. A method for routing data in a chipset arranged in a portable device, the chipset comprising at least one host processor, a controller, and a Near Field Communication (NFC)-type contactless data send/receive interface, the method comprising:

causing *a source point located in the host processor* in the portable device to send a command for opening a first data path designating a *destination point* located in the contactless data send/receive interface in the portable device;

in response to the command for opening the first data path, defining, by the controller in the portable device, the first data path by allocating to the first data path a routing channel number and by saving in a routing table the routing channel number and routing parameters comprising at least one identifier of the *source point* and one identifier of the *destination point*;

causing the *source point* to send to the controller data encapsulated in a frame having a header field comprising the routing channel number; and

upon receiving the data encapsulated in the frame having a header field comprising the routing channel number, causing the controller to search for a *destination point* of the data in the routing table by using the routing channel number as an index to select the *destination point* to which the controller subsequently sends the data.

Defendants' expert opines that the disputed terms can refer to "locations in the processor at which services execute (such as memory addresses)." (Dkt. No. 78-21, Jan. 17, 2016 Roy Decl. at ¶ 38).

The specification discloses, however, that a source or destination "point" can be an aspect of software:

[T]he source or destination points P1 and P2 located in the host processors are "services" (determined applications). These services can each ask the controller NFCC, independently of the other, to create data paths to simultaneously use the interface CLINT (subject to collision of modes and protocols, as indicated above). This software architecture thus enables a service to be implemented as source or destination points of a data path, and enables several data paths to be created simultaneously between two entities, for example between two host processors or between a host processor and the contactless data send/receive interface.

'419 Patent at 12:18–28; *see id.* at 5:44–46 ("source points or destination points saved in the routing table are services executed by a host processor"), 7:1–3 (same); *see also id.* at Cl. 9 (same); *id.* at Cl. 20 (same);<sup>13</sup> *id.* at 13:35–36 ("several data paths with multiple points P1, P2 in the application layers APL of the host processors HP1, HP2").

The above-cited evidence thus demonstrates that a "point" can be a hardware location or a software location. *See also id.* at 7:60–63 ("Source or destination points of a data stream in the chip set are designated P1 (point *located* in the host processor HP1), P2 (point *located* in the host processor HP2) and P3 (point *located* in the contactless interface CLINT).") (emphasis added).

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<sup>13</sup> *See Wright Med. Tech., Inc. v. Osteonics Corp.*, 122 F.3d 1440, 1445 (Fed. Cir. 1997) ("we must not interpret an independent claim in a way that is inconsistent with a claim which depends from it").

Plaintiff’s proposal of “through which data is sent,” however, would essentially read the word “source” out of the disputed term. Instead, a “source point” is a point from which a data path originates. *See, e.g.,* ’419 Patent at 3:4–6 (“an outgoing data stream . . . coming from a source point . . . sent to a destination point”), 3:10–12 (similar).

The Court therefore hereby construes **“a source point located in the host processor”** to mean **“a hardware or software entity in the host processor from which a data path originates,”** albeit with the understanding that the phrase “from which a data path originates” refers to where a “data path” originates, not necessarily where the “data” originates.

The Court further hereby construes **“destination point”** to mean **“hardware or software entity that receives data from a data path.”**

**C. “command for opening a first data path designating a destination point” and “command for opening a first data path . . . and designating a destination point”**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“command for making accessible a first data path that designates a destination point”	“command that opens a first data path to a destination point designated in the command”

(Dkt. No. 57, Ex. C at 28); (Dkt. No. 67, Ex. B at 15); (Dkt. No. 69 at 27); (Dkt. No. 78 at 26); (Dkt. No. 110 at p. 30 of 43). The parties have submitted that these terms appear in Claims 1 and 12 of the ’419 Patent. (Dkt. No. 67, Ex. B at 15).

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with the following preliminary construction: “command that directs the opening of a first data path to a destination point designated in the command.”

(1) The Parties’ Positions

Plaintiff argues that because surrounding claim language refers to operations for creating the first data path, thus making the first data path accessible, the command for opening a first

data path is a command for making accessible a first data path. (Dkt. No. 69 at 28). Plaintiff also argues that its proposed construction “is supported by and covers the embodiments in the specification, which provide a table that is updated dynamically, ’419 patent 8:51–65, and a static routing table that is pre-saved, *id.* at 8:66–9:12.” (Dkt. No. 69 at 28). Plaintiff further argues that “[Defendants’] construction does not include its own dictionary definition of the word ‘open,’ but changes the claimed ‘command for opening’ to a ‘command that opens.’” (*Id.* at 29).

Defendants respond that “[t]his term’s plain meaning requires a command that does at least two things: designates a destination point, and opens a data path to that destination point.” (Dkt. No. 78 at 27). Defendants argue that Plaintiff’s proposed construction “rewrit[es] the claim” and “is ambiguous.” (*Id.*). Further, Defendants argue, “the data path is opened by the controller when the controller receives the open command—no additional command is required.” (*Id.*).

Plaintiff replies: “[Plaintiff’s] construction equating ‘open’ with ‘making accessible’ is consistent with [Defendants’] evidence. [Defendants] further argue[] that the command designates a destination point. [Defendants’] argument is inconsistent with the plain language of claim 1, which recites that the ‘data path,’ not a ‘command,’ designates the destination point.” (Dkt. No. 88 at 9).

At the February 23, 2016 hearing, the parties did not present oral arguments as to this disputed term, but Defendants noted that they agreed with the Court’s preliminary construction.

## (2) Analysis

Claims 1 and 12 of the ’419 Patent recite (emphasis added):

1. A method for routing data in a chipset arranged in a portable device, the chipset comprising at least one host processor, a controller, and a Near Field

Communication (NFC)-type contactless data send/receive interface, the method comprising:

- causing a source point located in the host processor in the portable device to send a *command for opening a first data path designating a destination point* located in the contactless data send/receive interface in the portable device;

- in response to the *command for opening the first data path*, defining, by the controller in the portable device, the first data path by allocating to the first data path a routing channel number and by saving in a routing table the routing channel number and routing parameters comprising at least one identifier of the source point and one identifier of the destination point;

- causing the source point to send to the controller data encapsulated in a frame having a header field comprising the routing channel number; and

- upon receiving the data encapsulated in the frame having a header field comprising the routing channel number, causing the controller to search for a destination point of the data in the routing table by using the routing channel number as an index to select the destination point to which the controller subsequently sends the data.

\* \* \*

12. A chipset for sending/receiving data comprising a Near Field Communication (NFC)-type contactless data send/receive interface, a controller, and at least one input/output port to link the contactless data send/receive interface to a host processor, the contactless interface, the controller, and the host processor being arranged in a portable device, the controller being configured to:

- in response to a *command for opening a first data path sent by a source point located in a host processor and designating a destination point* located in the contactless data send/receive interface, open the first data path between the source point and a destination point by allocating to the first data path a routing channel number and by saving in a routing table the routing channel number and routing parameters comprising at least one identifier of the source point and one identifier of the destination point; and

- upon receiving data from the source point encapsulated in a frame having a header field comprising the routing channel number, search for a destination point of the data in the routing table using the routing channel number as index to select the destination point to which the controller is configured to send the data.

The specification discloses:

The actual creation of a data path is performed by the controller NFCC as HCI administrator (“HCI ADMIN”). When a command for creating a data path is received (“creating a route” command) and is receivable, the controller NFCC allocates a routing channel number CHAN<sub>i</sub> to the route, then writes in the routing table RT the parameters ID<sub>sp</sub>, ID<sub>dp</sub>, M<sub>i</sub>, PT<sub>i</sub> indicated in the command, and then sends a confirmation message to the entity that sent the command.

'419 Patent at 8:43–50; *see id.* at Abstract (“in response to a command for opening a data path . . . , defining a data path”).

The context of the claim and the specification thus show that a “command for opening a first data path designating a destination point” is a command that directs the opening of a data path to the designated destination point. To whatever extent Plaintiff maintains that the command need not designate a destination point, the Court hereby expressly rejects any such interpretation.

Further, above-quoted Claim 12, in particular, demonstrates that a “command for opening” need not itself perform the opening because Claim 12 recites a separate limitation of “open[ing].” *See Paragon Solutions, LLC v. Timex Corp.*, 566 F.3d 1075, 1087 (Fed. Cir. 2009) (“We apply a presumption that the same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims.”) (citation and internal quotation marks omitted).

Finally, although a dictionary definition cited by the parties includes a definition of “open” as meaning “[t]o make an object, such as a file, accessible” (Dkt. No. 69, Ex. S, *Microsoft Computer Dictionary* 377 (5th ed. 2002)), Plaintiff’s proposal of “making accessible” would tend to confuse rather than clarify the scope of the claims, particularly in light of the above-discussed intrinsic evidence. *See Phillips*, 415 F.3d at 1321 (“[H]eavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification.”).

The Court therefore hereby construes **“command for opening a first data path designating a destination point”** and **“command for opening a first data path . . . and designating a destination point”** to mean **“command that directs the opening of a first data path to a destination point designated in the command.”**

**D. “routing table”**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
“a collection of data including at least one routing channel number and corresponding routing parameter(s)”	“data structure maintained in the controller comprising a table in which data paths are saved”

(Dkt. No. 57, Ex. C at 29); (Dkt. No. 67, Ex. B at 15); (Dkt. No. 69 at 29); (Dkt. No. 78 at 28); (Dkt. No. 110 at p. 30 of 43). The parties have submitted that this term appears in Claims 1, 3, 4, 12, 14, and 15 of the ’419 Patent. (Dkt. No. 67, Ex. B at 15).

Shortly before the start of the February 23, 2016 hearing, the Court provided the parties with the following preliminary construction: “an organized collection of data identifying at least one data path.”

(1) The Parties’ Positions

Plaintiff argues that “[Defendants’] construction fails because it does not construe the word ‘table,’” and “[Defendants’] construction is also ambiguous and will confuse the jury.” (Dkt. No. 69 at 29–30).

Defendants respond that “[Defendants’] construction is fully supported by the specification, which describes the routing table as a structure that exists across multiple commands for opening routes.” (Dkt. No. 78 at 28). Defendants also submit that “[e]very routing table described in the patent is a ‘table’ of data paths and not merely a formless ‘collection of data’ as NFCT’s construction suggests.” (*Id.*). Finally, Defendants argue that



“[Plaintiff’s] construction also adds redundant limitations” because “[e]verything other than ‘collection of data’ is explicitly recited elsewhere in the claims and should not be imported into the definition of ‘routing table’ itself.” (*Id.* at 29).

Plaintiff replies: “The claims do not require the ‘routing table’ be maintained in the controller. In fact, [Defendants’] construction of maintaining the routing table in the controller improperly excludes the embodiment of Fig. 5, where the routing table RT is saved in memory MEM3 of the reader, and not the controller NFCC. ’419, 11:13–20.” (Dkt. No. 88 at 9). “Further,” Plaintiff argues, “nothing in the specification indicates that the ‘routing table’ must be permanent or maintained for a long time.” (*Id.*).

At the February 23, 2016 hearing, Defendants urged that the routing table must be maintained in order to be useful, that is, it must exist beyond merely the use of one data path. Defendants nonetheless acknowledged that a routing table need not be permanent and can be dynamically altered. Plaintiff responded that Defendants’ proposed interpretation is unworkable because there is no way to determine if a routing table has existed long enough so as to be “useful.”

## (2) Analysis

Defendants’ proposed construction uses the constituent term “table,” but construction of the constituent term “table” is appropriate to assist the finder of fact. *See TQP Dev., LLC v. Merrill Lynch & Co., Inc.*, No. 2:08-CV-471, 2012 WL 1940849, at \*2 (E.D. Tex. May 29, 2012) (Bryson, J.) (“some construction of the disputed claim language will assist the jury to understand the claims”).

The specification discloses:

An example of a routing table RT created by the controller NFCC is described by Table 1 in Appendix 2. This routing table RT is created after receiving a series of

commands for opening routes having source points located in one of the processors HP1 or HP2 (i.e., a source point P1 or P2). \* \* \* Although presented statically in Table 1, the routing table RT is dynamic and is updated in real time according to the creation, modification, or removal commands received by the controller NFCC.

In an alternative embodiment, the routing table RT is static and has been pre-saved by the controller NFCC . . . .

'419 Patent at 8:51–67; *see id.* at 7:66–8:1 (“the use of a routing table RT in which data paths are saved, each data path being identified by a routing channel number CHAN<sub>i</sub>”); *id.* at 9:38–44; *see also id.* at App’x 2 (“Examples of Routing Tables”).

Claim 1 of the '419 Patent recites, in relevant part (emphasis added): “saving in a routing table the routing channel number and routing parameters comprising at least one *identifier* of the source point and one *identifier* of the destination point,” and “search for a destination point of the data in the routing table by *using the routing channel number as an index* to select the destination point to which the controller subsequently sends the data.” Claim 12 of the '419 Patent includes similar language. The surrounding claim language thus demonstrates that a “routing table” is not merely any collection of data but rather is an organized collection of data that identifies data paths.

As to extrinsic evidence, Plaintiff has cited technical dictionaries that define “table” as: “A collection of data, each item of which is uniquely identified by a label, its position with respect to other items, or some other means.” (Dkt. No. 69, Ex. L) (*Modern Dictionary of Electronics* 759 (7th ed. 1999)); *see (id., Ex. K) (The Authoritative Dictionary of IEEE Standards Terms* 1149 (7th ed. 2000)) (similar).

Plaintiff’s proposal of merely “collection of data” is potentially overbroad because it does not necessarily connote any organization of the data. Although Plaintiff has argued that “[t]he correspondence between the routing channel number and the routing parameter(s) makes the

collection of data a routing table” (Dkt. No. 88 at 10), Plaintiff’s proposed construction does not specifically require any correspondence but rather merely requires that corresponding parameters be included within the collection of data. The disputed term should therefore be construed so as to explicitly require organization.

Further, Defendants’ proposal of “data path” is consistent with the intrinsic evidence and is simpler and clearer than Plaintiff’s proposal of “routing channel number and corresponding routing parameter(s).” Defendants’ proposal of “maintained,” however, would tend to confuse rather than clarify the scope of the claims because surrounding claim language includes limitations as to saving information to, and searching for information in, the routing table. *See, e.g.,* ’419 Patent at Cl. 1. Also, the parties essentially agreed at the February 23, 2016 hearing that although the routing table must exist at least long enough to be used, it need not be permanent and it can be altered. In the absence of any real substantive disagreement, and because surrounding claim language already recites “saving” information “in the routing table,” no further construction is necessary in this regard. Finally, Defendants have not adequately justified any limitation as to where the routing table resides.

The Court therefore hereby construes **“routing table”** to mean **“an organized collection of data identifying at least one data path.”**

**E. “configuration parameters for configuring the contactless data send/receive interface”**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
Plain Meaning	“parameters specifying modes and protocols for configuring the contactless data send/receive interface”

(Dkt. No. 57, Ex. C at 30); (Dkt. No. 67, Ex. B at 15); (Dkt. No. 69 at 30). The parties have submitted that this term appears in Claims 4 and 15 of the '419 Patent. (Dkt. No. 67, Ex. B at 15).

Plaintiff argues that “[t]he plain meaning of this term would have been readily understandable to one skilled in the art,” and “[Defendants’] construction improperly limits the claimed ‘configuration parameters’ to the ‘parameters specifying modes and protocols’ disclosed in an embodiment, absent a clear indication in the intrinsic evidence that the patentee intended the claims to be so limited.” (Dkt. No. 69 at 30).

Defendants respond: “[Defendants] . . . agree[] with [Plaintiff] that ‘configuration parameters for configuring the contactless data send/receive interface’ (claims 4, 15) is governed by its plain meaning and needs no construction.” (Dkt. No. 78 at 25 n.12); *see* (Dkt. No. 110 at p. 32 of 43).

The parties’ agreement in this regard is set forth in Appendix A to this Claim Construction Memorandum and Order.

**F. “the controller identifies at least one recipient host processor of the data using at least as determination criteria the operating mode and the contactless communication protocol used by the contactless data send/receive interface” and “determine a destination point of the data by using as determination criteria the operating mode and the contactless communication protocol used by the contactless data send/receive interface”**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain Meaning	Indefinite

(Dkt. No. 57, Ex. C at 31, 32); (Dkt. No. 67, Ex. B at 16, 17). The parties have submitted that these terms appear in Claims 7 and 18, respectively. (Dkt. No. 67, Ex. B at 16, 17).

The parties have reached agreement on constructions for these terms. (Dkt. No. 110 at pp. 33, 38 of 43). The parties' agreements are set forth in Appendix A to this Claim Construction Memorandum and Order.

## **VI. CONCLUSION**

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit.

The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

**SIGNED this 28th day of April, 2016.**

  
ROY S. PAYNE  
UNITED STATES MAGISTRATE JUDGE

## APPENDIX A

<u>Term</u>	<u>Parties' Agreement</u>
“simulate the operation of a contactless integrated circuit” (’770 Pat., Cl. 1)	“simulate the operation of a contactless integrated circuit without being a contactless integrated circuit”
“the device modulates the excitation signal” (’770 Pat., Cl. 1)	“the device varies the amplitude, frequency, or phase of the excitation signal to transmit data”
“generating a magnetic field and modulating the amplitude of the magnetic field” (’770 Pat., Cl. 23)	“generating a magnetic field and varying the amplitude of the magnetic field to transmit data”
“contactless integrated circuit” (’770 Pat., Cls. 1, 8, 14, 18, 28, and 30)	“passive device that does not send a magnetic field and that sends data to a reader by short-circuiting its antenna circuit by means of a switch”
“detected . . . as if the load modulation signal were a load modulation signal applied to an antenna load modulation switch of a contactless integrated circuit” (’770 Pat., Cls. 1, 14, and 30)	Plain Meaning
“contactless data send/receive interface” (’419 Pat., Cls. 1, 4, 7, 12, 15, 18)	Plain Meaning
“configuration parameters for configuring the contactless data send/receive interface” (’419 Pat., Cls. 4, 15)	Plain Meaning
“the controller identifies at least one recipient host processor of the data using at least as determination criteria the operating mode and the contactless communication protocol used by the contactless data send/receive interface” (’419 Pat., Cl. 7)	Plain meaning

“determine a destination point of the data by using as determination criteria the operating mode and the contactless communication protocol used by the contactless data send/receive interface” ('419 Pat., Cl. 18)	Plain meaning
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(Dkt. No. 57 at Ex. A); (Dkt. No. 78 at 1 n.2); (*id.* at 9 n.5); (*id.* at 21 n.10); (*id.* at 25 n.12); *see* (Dkt. No. 110).